JC03 Rec'd PCT/PT0 1 4 NOV 2005



PTO/SB/21 (09-04) Approved for use through 07/31/2006, OMB 0651-0031

	Approved for use already 107/2000. Civil coot coot
	U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond	and to a collection of information unless it displays a valid OMB control number

Application Number 10/523475-Conf. #2300 Filing Date TRANSMITTAL February 4, 2005 First Named Inventor **FORM** Magdalene M. MORAN Art Unit Not Yet Assigned (to be used for all correspondence after initial filing) **Examiner Name** Not Yet Assigned Attorney Docket Number Total Number of Pages in This Submission 4 0110313.00139US2 ENCLOSURES (Check all that apply) After Allowance Communication Fee Transmittal Form Drawing(s) Appeal Communication to Board of Fee Attached Licensing-related Papers Appeals and Interferences Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) Amendment/Reply Petition Petition to Convert to a After Final Proprietary Information Provisional Application Power of Attorney, Revocation Status Letter Affidavits/declaration(s) Change of Correspondence Address Other Enclosure(s) (please Extension of Time Request Terminal Disclaimer Identify below): Express Abandonment Request Request for Refund CD, Number of CD(s) x Information Disclosure Statement Certified Copy of Priority Landscape Table on CD Document(s) Reply to Missing Parts/ Remarks Incomplete Application Reply to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm Name WILMER CUTILER PICKERING HALE AND DORR LLP Signature Printed name Lisa N. Geller, Ph.D. Date Reg. No. 2005 51,726 mum lus 1 ()

I haraby cortify that this correspondence is being denosited with	the U.S. Postal Service with sufficient postage as First Class Mail, in
Thereby certify that this correspondence is being deposited with	the old for the state of the st
l an envelope addressed to: Commissioner for Patents, P.O. Box	1450, Alexandria, VA 22313-1450, on the date shown below. Signature: (Sarah Farris)
	1
() Mrs. 6 a 10 2005	TOWN TINE
Dated: Country 10, 2003	Signature: (Sarah Farris)
Dates.	



I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below

Dated Jaramber 10, 2005 Signature:

(Sarah Farris)

Docket No.: 0110313.00139US2 (PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Magdalene M. MORAN et al.

Application No.: 10/523475

Filed: February 4, 2005

For: SPERM-SPECIFIC CATION CHANNEL,

CATSPER4, AND USES THEREFOR

Confirmation No.: 2300

Art Unit: Not Yet Assigned

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby make of record the publications listed on the attached Form PTO/SB/08a/b. Copies of all cited references are enclosed.

This Information Disclosure Statement is being filed prior to the mailing date of a first Office Action on the merits. No fee is required.

Applicants request that the Examiner initial and return a copy of the enclosed Form PTO SB-08 with the next communication.

Dated: 10 November 2005

Respectfully submitted,

Lisa N. Geller, Ph.D.

Registration No.: 51,726

WILMER CUTLER PICKERING HALE AND

DORR LLP

60 State Street

Boston, Massachusetts 02109

(617) 526-6000

Attorney for Applicants

NOV 1 4 2005 Ur Substitu

PTO/SB/08a/b (07-05)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE espond to a collection of information unless it contains a valid OMB control number.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known				
Application Number 10/523475-Conf. #2300				
Filing Date February 4, 2005				
First Named Inventor Magdalene M. MORAN				
Art Unit N/A				
Examiner Name Not Yet Assigned				
Attorney Docket Number	110313.139 US2			

	U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	

	FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶	
	ВА	WO-00/61624	10-19-2000	Human Genome Sciences, Inc.			
	ВВ	WO-01/07611	02-01-2001	Genentech, Inc.			
	ВС	WO-01/54477	08-02-2001	Hyseq, Inc.			
	BD	WO-01/75067	10-11-2001	Hyseq, Inc.			
	BE	WO-02/090567	11-14-2002	Children's Medical Center, Corporation			
	BF	WO-03/089583	10-30-2003	Origene Technologies, Inc.			
	BG	WO-03/091434	11-06-2003	Takeda Chemical Industries, Ltd.			
	BH	WO-03/099865	12-04-2003	Inpharmatica Limited		Ш	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

	NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²			
	CA	Arnoult et al., "Activation of mouse sperm T-type Ca2+ channels by adhesion to the egg zona pellucida," Proc. Natl. Acad. Sci. USA, Vol. 93, pp. 13004-13009.				
	СВ	Bedford, "Mammalian Fertilization Misread? Sperm Penetration of the Eutherian Zona Pellucida Is Unlikely to be a Lytic Event," Biology of Reproduction, Vol. 59, pp. 1275-1287.				
	CC	Darszon et al., "Ion Channels in Sperm Physiology," Physiological Reviews, Vol. 79, No. 2, April 1999, pp. 481-510.				
	CD	Database EMBL, 11 October 2001, XP002314905, Database Accession No. AAS90759				
	CE	Database EMBL, 14 November 1997, XP002314900, Database Accession No. AA662668				
	CF	Database EMBL, 2 March 2000, XP002314904, Database Accession No. AW472972				
	CG	Database EMBL, 3 March 2000, XP002306736, Database Accession No. AA416577				
	СН	Database EMBL, 2 December 2000, XP002314901, Database Accession No. BF436942				
	CI	Database EMBL, 9 May 2001, XP002314908, Database Accession No. BG718343				
	CJ	Database EMBL, 8 June 2000, XP002314899, Database Accession No. AW971983				
	СК	Database EMBL, 8 October 2001, XP002314906, Database Accession No. BI826910				
	CL	Database EMBL, 15 October 2001, XP002306740, Database Accession No. AF407332				
	СМ	Database EMBL, 29 November 2001, XP002314910, Database Accession No. ABL90376				
	CN	Database EMBL, 1 December 2001, XP002306739, Database Accession No. Q91ZR5				

Examiner	Date
Signature	Considered

PTO/SB/08a/b (07-05)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO				Complete if Known		
"	outdie for form 1 from the			Application Number	10/523475-Conf. #2300	
l in	NFORMATIO	V DI	SCLOSURE	Filing Date	February 4, 2005	
S	TATEMENT	BY /	APPLICANT	First Named Inventor	Magdalene M. MORAN	
				Art Unit	N/A	
	(Use as many sheets as necessary)		Examiner Name	Not Yet Assigned		
Sheet	2	of	2	Attorney Docket Number	110313.139 US2	

CO	Database EMBL, 11 September 1997, XP002314902, Database Accession No. AA574312	
CP	Database EMBL, 30 November 1999, XP002314903, Database Accession No. AW197851	
CQ	Database EMBL, 3 March 2000, XP002306735, Database Accession No. AA416682	
CR	Database EMBL, 30 May 2000, XP002306734, Database Accession No. AP000586	
CS	Database EMBL, 20 October 2000, XP002314898, Database Accession No. BF092492	
CT	Database EMBL, 25 January 2001, XP002314968, Database Accession No. BF934163	
CU	Database EMBL, 8 October 2001, XP002314907, Database Accession No. BI829451	
CV	Database EMBL, 15 October 2001, XP002306738, Database Accession No. AF407333	
CW	Database EMBL, 29 November 2001, XP002314911, Database Accession No. ABB89967	
СХ	Database EMBL, 1 December 2001, XP002306737, Database Accession No. Q96P76	
CY	Database EMBL, 25 March 2004, XP002314912, Database Accession No. ACN41330	
CZ	Database EMBL, 9 May 2001, XP002314909, Database Accession No. BG718245	
CA1	Garbers, "Ion channels. Swimming with sperm," Nature, Vol. 413, No. 6856, Oct 2001, pp. 579, 581-582, XP 002314956	
CB1	Hyne and Garbers, "Calcium-dependent increase in adenosine 3', 5'-monophosphate and induction of the acrosome reaction in guinea pig spermatozoa," Proc. Natl. Acad. Sci. USA, Vol. 76, No. 11, pp. 5699-5703.	
CC1	Jungnickel et al., "Trp2 regulates entry of Ca2+ into mouse sperm triggered by egg ZP3," Nature Cell Biology, Vol. 3, May 2001, pp. 499-502.	
CD1	O'Toole et al., "Ca2+ Entry through Store-operated Channels in Mouse Sperm Is Initiated by Egg ZP3 and Drives the Acrosome Reaction," Molecular Biology of the Cell, Vol. 11, pp. 1571-1584, May 2000.	
CE1	Quill et al., "A voltage-gated ion channel expressed specifically in spermatozoa," PNAS, Vol. 98, No. 22, 12527-12531.	
CF1	Ren et al., A Sperm Ion Channel Required for Sperm Motility and Male Fertility," Nature, Macmillian Journals Ltd., London, Vol. 413, No. 6856, October 11, 2001, pp 603-609	
CG1	Santi et al., "A dihydropyridine-sensitive T-type Ca2+ current is the main Ca2+ current carrier in mouse primary spermatocytes," American Journal of Physiology, Vol. 271, pp. C1583-93, 1996.	
CH1	Serrano et al., "Voltage-dependent Ca2+ channel subunit expression and immunolocalization in mouse spermatogenic cells and sperm," FEBS Letters, 462, pp. 171-176, 1999.	
CI1	Strausberg, Homo Sapiens, Clone Image. 03 March 2003, pages 1-3, especially pages 2-3.	
CJ1	Tash, "Role of the eAmp, Calcium, and Protein Phosporylation in Sperm Motility," Controls of Sperm Motility: Biological and Clinical Aspects, ed. Gagnon, pp. 229-240, 1990.	
CK1	Wassarman et al., "A profile of fertilization in mammals," Nature Cell Biology, Vol. 3, E59-E64, February 2001.	
CL1	Wennemuth et al., "Cav2.2 and Cav2.3 (N- and R-type) Ca2+ Channels in Depolarization- evoked Entry of Ca2+ into Mouse Sperm," The Journal of Biological Chemistry, Vol. 275, No. 28, pp. 21210-21217, 2000.	
CM1	Weyand et al., "Cloning and functional expression of a cyclic nucleotide-gated channel from mammalian sperm," Nature, Vol. 368, pp. 859-863, April 28 1994.	
CN1	Wiesner et al., "Cyclic Nucleotide-gated Channels on the Flagellum Control of Ca2+ Entry into Sperm," The Journal of Cell Biology, Vol. 142, No. 2, pp. 473-484, 1998.	
CO1	Yanigimachi, "Mammalian Fertilization," The Physiology of Reproduction, Second Edition, eds. Knobil and Neill, pp. 189-317, 1994.	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner	Date
Signature	Considered